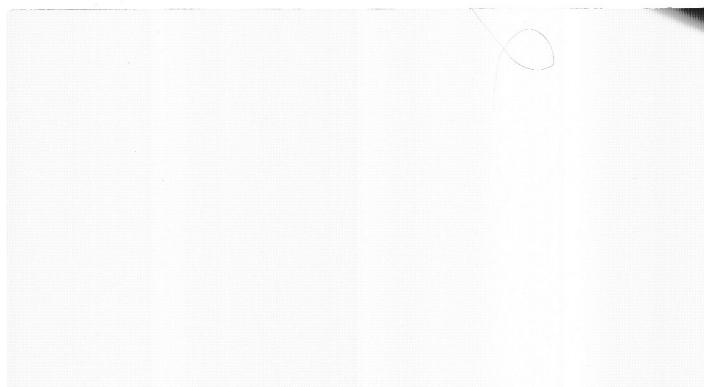


A Datapro Feature Report

**Glossary of
Word Processing Terms**



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DATAPRO RESEARCH CORPORATION, 1805 Underwood Boulevard, Delran, New Jersey 08075, (609) 764-0100

Glossary

ACCESS TIME — The interval between the time data are called for or requested to be stored and when delivery or storage is completed.

ACOUSTIC COUPLER — A data communications device that converts electrical data signals to and/or from tones for transmission over a telephone line using a conventional telephone headset.

ADDRESS — A locator assigned to a specific position of keyed material on a recording medium.

ADJUST — A formatting procedure which allows line endings to be changed to conform with new margin settings.

ADMINISTRATIVE SECRETARY — A secretarial specialist who handles such non-typing activities as the telephone, filing, reservations, mail, etc.

ADMINISTRATIVE SUPPORT — An office personnel concept whereby non-typing functions such as filing, telephoning, scheduling, and reservations are performed by a specialized secretarial team.

ADMINISTRATIVE SUPPORT CENTER — A physical location within an office where administrative support personnel function.

ALGORITHM — A group of programming routines which will cause the system to perform such processes as hyphenation; character spacing for justification; etc.

ALPHABETIC COMMANDS — Instructions to a word processor implemented by a Code or Control Key plus alphanumeric key or keys. Such dual function keys may be marked on the key cap, or the operator may be required to memorize most or all of the alphanumeric command set.

AMORTIZATION — The write-off period for purchasing equipment, most commonly five years.

ANALOG — A term used in contrast to digital, relating to representation by means of continuously variable physical conditions. In facsimile, the term "analog" refers to the way in which a fax unit converts the optical data derived from scanning the original into electrical signals. Generally associated with slower facsimile units, the typical analog transmitter scans every inch of an original: the characters, spaces between characters and the margins. Each picture element of the original is represented by an analogous electrical signal. A combination of these analog signals creates a continuous electrical waveform (current) which, when used to drive a printer, reproduces a series of picture elements which closely resemble the original.

APPLICATIONS SOFTWARE — Software usually provided by the vendor which allows the user to perform

This Glossary provides definitions for terms used to describe word processing hardware and procedures. Terminology of such a dynamic industry as Word Processing is subject to as many interpretations as there are manufacturers or models. Therefore, the Glossary will be augmented on a continuing basis with redefinitions, new terms, and additions for whole new areas. Datapro seeks your assistance in keeping the Glossary up-to-date, and hopes that you will forward comments and additional definitions.

data processing or other tasks with the word processing system without having to write such software. Systems which employ such software are generally multipurpose, and may or may not provide a user programming capability.

APPLIQUE — See Baseplate.

ARCHIVE — A procedure for transferring information from an on-line storage diskette or memory area to an off-line storage medium.

ARITHMETIC CAPABILITY — The ability of a word processing system to be used as a calculator or adding machine. Some of the more sophisticated systems have the ability to do arithmetic tasks; a smaller number can do such tasks as part of word processing routines, with totals embedded in text, etc.

ARO — After Receipt of Order.

ASCII — American (National) Standard Code for Information Interchange. A seven bit plus parity code established by the American National Standards Institute to achieve compatibility between data services. ASCII consists of 96 displayed characters and 32 non-displayed control characters.

▲ **ASR (Automatic Send Receive)** — A communicating device that operates in an automatic send/receive mode of transmission.

ASSEMBLER — A computer program that converts a higher-level (English-like) programming language into machine-readable instructions.

ASSET — Property that is owned by a company. The book value of such property.

ASYNCHRONOUS — A mode of data transmission in which data is transmitted a character at a time preceded by a start bit and followed by a stop bit in order to insure correct receipt. Commonly used for interactive communications.

Glossary

ATMS — Advanced Text Management System. An advanced form of ATS.

ATS — Advanced Text System. An IBM software package which permits a computer to be used for word processing with text entered and retrieved via remote, interactive, computer terminals.

AUTOMATIC ANSWER — A feature by which a communicating word processor may receive text without an operator in attendance.

AUTOMATIC CALL — A communications feature that allows a transmission control unit to automatically establish a connection with one or more message recipients.

AUTOMATIC CARRIER RETURN — Automatic performance of a carrier return when the last word which will fit onto a line is typed. The system generally has a buffer to hold the word currently being typed until it judges whether to place the word on the current line, or to wrap it onto the next line. Systems which automatically perform carrier returns are speedier on input, since the operator may type text at a uniform speed without pausing at each line end to perform a return.

AUTOMATIC CENTERING — The ability to automatically center a word or text segment between margins or a designated point. Function implementation may be by a single keystroke or multiple keystrokes for the centering of previously typed text or text as it is typed. Some systems have the capability to center material between tab settings.

AUTOMATIC DECIMAL TAB — Automatic alignment of columns of decimal figures on the decimal point. The typist can type numbers without regard for alignment, with the system performing the aligning chore.

AUTOMATIC DIAL — A communications feature whereby the calling unit has the ability to automatically establish a connection with one or more message recipients.

AUTOMATIC FILE SELECT — The ability of the system to make selections from data files, based on the characters which appear in a certain data field. For instance, using a zip code field, the system can select all the addresses with a 19101 zip code for one letter, and type a different letter to those in zip code 19104, etc.

AUTOMATIC FILE SORT — The ability of the system to arrange data in alphabetical, numerical or other order. This feature is important on systems that sort or manipulate address lists; changes then need not be performed in alphabetical order.

AUTOMATIC FOOTNOTE TIE-IN — The ability of the system to tie footnotes to appropriate text segment. If text segment is moved to another page or document, the footnote will travel with it. Generally, systems which are

sufficiently sophisticated to offer footnote tie-in also automatically handle the division of space between the main text and footnotes.

AUTOMATIC HEADERS/FOOTERS — The ability to place header/footer text at the top or bottom of each page of a multi-page document. The operator specifies the text once, and the header/footer (usually document title, company name or confidentiality requirements) is automatically added during printout. Changes may be made to the main document text without affecting the headers and footers.

AUTOMATIC INPUT UNDERLINE — System allows the operator to indicate the beginning and end of an underline by a code, rather than backspacing and underlining on a character-by-character basis. Some systems allow the operator to choose between underlining words only, or underlining spaces and words. A few use a code that will underline the previous or next word, line, or other text segment.

AUTOMATIC LETTER WRITING — The ability of a word processing system to merge a name and address list with boilerplate text to produce repetitive, personalized correspondence.

AUTOMATIC LINE SPACING — Different line spacings (single, double, triple, etc.) are permitted without performing physical setting changes on the printer. This enables the typist to input text with combinations of spacing without stopping and resetting the printer during playback printout.

AUTOMATIC MARGIN ADJUST — The ability to perform margin changes by a single command, automatically changing line endings without further intervention. During margin adjust procedures, temporary hyphens are normally dropped (unless they occur at the end of a line), and the system may give the operator an opportunity to make new hyphenation decisions to afford a "tight" line.

AUTOMATIC PAGE NUMBERING — The ability of a word processing system to automatically generate page numbers within a document. When text is rearranged and page numbers change, the system can generate a new set of correct page numbers. This feature enables the operator to input text without regard to final page endings. The system will create pages of the desired length, and number them appropriately.

AUTOMATIC PAGINATION — The ability to take a multi-page document and divide it into pages of a specified length (in numbers of lines). Often, such ability is joined with the capability to automatically generate page numbers.

AUTOMATIC REPAGINATION — An automatic routine to change page endings if text is inserted or deleted within a document, or if a new page length is desired. Text

Glossary

will be removed from or added to pages, as required, to maintain page length.

AUTOMATIC SEND — A communications capability whereby the communicating system has the ability to automatically send out a message in an unattended mode.

AUTOMATIC TYPEWRITER — The simplest form of word processor. Used for straight, repetitive output with little or no text editing.

AUTOMATIC WIDOW ADJUST — The ability of a word processor to automatically prevent the first line of a paragraph, or a title or heading from being the last line on a page. It may also prevent a last line from being the first line on a new page. Such a feature is especially desirable if the system paginates or repaginates automatically.

AUTOMATIC WORD WRAPAROUND — The ability of a word processor to automatically place a word which does not fit onto the line being typed onto the next line. Frequently combined with the Auto Carrier Return feature. Also used to denote systems which can wrap words during margin adjust procedures.

BACKGROUND PROCESSING — The automatic execution of a print function, or on some systems, a sort function, simultaneous to the keyboarding or editing of another document.

BACKLOG — Incomplete or unprocessed work.

BACK UP — A means of protecting valuable company information. May take the form of: 1) duplicating tapes or disks on which data is stored; 2) providing a system with an alternate power source to protect data in volatile memory in the event of a power failure; 3) providing a redundant system.

BAND PRINTER — Also known as a belt printer, an impact device which employs a metal band imprinted with characters which rotates horizontally past the paper. Impressions are made through the firing of hammers against the paper, ribbon and belt/band.

BANDWIDTH — The range of frequencies that can pass through a circuit. It is a measure of the rate that information can be passed through the circuit.

BASEPLATE — An interface device which connects to an ordinary typewriter, converting it into (with an attached media console) a low-level word processor.

BASIC — A higher-level, English-like computer programming language.

BATCH, BATCHING, BATCH PROCESSING — A computer procedure where similar tasks are grouped and performed sequentially to increase productivity and simplify operations.

BAUD — In communications, a unit of transmission speed; generally a baud will equate to a bit (of data) per second.

BAUDOT CODE — A data transmission code in which five bits represent one character.

BELT PRINTER — See Band Printer.

BIDIRECTIONAL PRINTING — With bidirectional or bustrophedon printing, the system prints line 1 from left-to-right and line 2 from right-to-left, saving time by avoiding unnecessary carriage (or element) movement. A few systems which employ bidirectional printing will also check for the closest margin before deciding to print a line left-to-right or right-to-left; this can save a few seconds in printing a segment immediately following a very short line.

BISYNCHRONOUS — A set of operating procedures originated by IBM for the synchronous transmission of binary coded data.

BIT — The commonly used abbreviation for binary digit. A bit is the smallest unit of information recognized by a computer, and is a unit of information corresponding to a choice between two alternatives (such as one and zero).

BLOCK MOVE/COPY — The ability to designate a block of text (generally with some maximum number of characters and related to buffer size), and to move it within the document or to another document. Most systems which can access and move blocks of text can also copy blocks to another storage location (for editing) without erasing the original text.

BOILERPLATE — Stored paragraphs which may be combined to create a new document. Variable information, either prerecorded or keyboarded, may be combined with such boilerplate in most systems.

BOND — A common, relatively high-grade, paper stock employed in the office for letters, business forms and copying. Bond usually has a rag content ranging from 25% to 100%.

BROADBAND — See Wideband.

BSC — Binary Synchronous Communication. An IBM designation referring to a specific communications procedure using synchronous data transmission.

BUBBLE MEMORY — A new non-volatile storage technique which uses magnetic fields to create regions of magnetization; a pulsed field breaks the regions into isolated bubbles, free to move along the surface of the crystal sheet which contains the regions. The presence or absence of a bubble represents digital (bit, not bit) information. External electromagnetic fields manipulate the bubbles (information) past "read/write" locations within the memory. This is analogous to the motion of a read/write head in disk storage, or magnetic tape motion

Glossary

past read/write heads in magnetic tape storage. Because bubble devices are very tiny and are non-volatile (information is not lost when current is interrupted), this variety of storage is likely to find wide application in terminals, word processors, and other office devices, particularly when volume production decreases cost.

BUFFER — A high-speed area of storage that is temporarily reserved for use in performing the input/output operation, into which data is read or from which data is written.

BUFFER CONFIGURATION — The way in which the system buffer may be utilized, especially whether it may be split (and where, if restricted), to allow text (e.g., a letter) to be merged with data (e.g., names and addresses).

BUFFER SIZE — The number of characters of text and command codes a system can manipulate at one time.

BUG — A program defect or error.

BUSINESS APPLICATION — An application that pertains to the functions of a business. (e.g. accounting, invoicing, etc.)

BUSTROPHEDON PRINTING — See Bidirectional Printing.

BYTE — A sequence of eight adjacent binary digits that are operated upon as a unit and that constitute the smallest addressable unit in a computer or word processing system.

CAPACITY — A term describing the number of bits encoded onto a magnetic disk or diskette for the storage of information, usually expressed in number of characters. Capacity is governed by the number of serial bits per inch recorded and the number of tracks on the media. See also, double density. Generally describes the amount of text which may be stored on one unit of mag media, expressed in number of characters or pages.

CARRIAGE PAPER WIDTH — Limits the maximum paper width. Maximum writing line is usually two inches less than physical paper width.

CARRIER RETURN — See Automatic Carrier Return.

CARTRIDGE — See Magnetic Media.

CASSETTE — See Magnetic Media.

CCITT — The Consultative Committee on International Telephone and Telegraph is a United Nations group currently setting up worldwide communications standards.

CENTERING — See Automatic Centering.

CENTRAL DICTATION SYSTEM — A class of dictation equipment designed for local and/or remote point-of-dictation, multi-originator facilities where all

dictation is pooled in a central recorder or "tank". The dictator accesses the system via a personal microphone or handset interfaced network. One or more typist-transcriptionists continually monitor the tank and transcribe dictated correspondence. Central systems may be configured to handle from two to an unlimited number of dictators.

CHAIN PRINTER — An impact printing technique in which a set of character slugs moves horizontally past a set of hammers. As the character slugs pass in sequence, hammers are fired to imprint each required character through a ribbon onto paper. The character slugs are connected and pull each other around a track. More than one set of characters may compose a chain. Another method of using character slugs is to mount them in a track which moves. This latter technique is called the TRAIN process.

CHARACTER GENERATION — The technique used to generate characters on the display screen. See Dot Matrix.

CHARACTER SET — Total number of different characters displayable, including alphabetics, numerics, and special symbols. Alphabetics may be shown as upper case only, or upper and lower case.

CHARACTER SIZE CONTROL — The ability of a display screen to allow the operator to view a full-page of text at regular character size or one-half page at double (vertical) size. A few systems also allow the operator to view a double horizontal page (for wide-page work), such as tabular reports at half-character size.

CHARACTER SPACING DISPLAY — The ability of a word processor to show characters in different pitch and/or proportional spacing on the display.

CHARGE — In an electrostatic output device, the electrical charge of the surface of the photoconductor.

CHIP — A microprocessor that is a complete computer on a single chip of silicon. No larger than an inch square, a chip contains all of the essential elements of a central processor, including the control logic, instruction decoding, and processing circuitry. To be useful, the microprocessor chip or chips are combined with memory and I/O integrated circuit chips to form a "microcomputer," a machine almost as powerful as a minicomputer. These chips usually fill no more than a single printed circuit board.

COAXIAL CABLE — A cable consisting of one conductor usually a small copper tube or wire, within and surrounded by a shield made of a separate electrically insulated wire.

COBOL — A higher-level, English-like, computer programming language.

Glossary

CODE CONVERSION — The translation from one type of code to another.

CODE SET — A specific set of symbols and rules used to represent information.

COLUMN MOVE/DELETE — The ability of a word processor to manipulate characters vertically within a column. This feature is important for tabular work, since a column can be moved or deleted with a minimum number of commands. In less sophisticated systems, columns must be moved or deleted a line segment at a time in multiple steps.

COLUMN WRAP — The ability of a word processing system to automatically readjust and rewrap text among columns to conform to a new format or to a specified format after an insertion, deletion or edit operation has been performed.

COM — Computer Output Microfilm. Normal printed output of a computer reduced to one of several available microforms by a special output device that takes the place of the normal print output device. The COM unit allows high quality output at speeds of 5000 or more lines per minute. Computer magnetic media files are fed directly into a recording device for rapid preparation of the data, and output to extensively reduced film images. Microform viewers are used at strategic locations for rapid dissemination of information. The system has the advantages of rapid access to vital business data, and reduction of storage space.

COMMAND — A signal or group of signals which causes a word processor to execute an operation or series of operations.

COMMON CARRIER — A government-regulated private company that furnishes the general public with telecommunications service facilities; for example, a telephone or telegraph company.

COMMUNICATIONS — See Data Communications.

COMMUNICATIONS NETWORK — The connecting of geographically separated communicating devices via transmission lines. A local network connects users within a limited geographic area while a remote network connects widely dispersed locations.

COMPATIBILITY — A characteristic of word or data processing equipment which permits one machine to accept and process data prepared by another machine without conversion or code modification.

COMPILER — Software that translates program instructions written in a high-level language such as BASIC, FORTRAN, COBOL, or PL-1 into object code (machine level language) for execution by the system. The presence of a compiler on a word processing system indicates that the system employs a multi-purpose

computer and that the manufacturer allows or encourages user programming.

CONCURRENCY — The ability of a communicating word processor to send and/or receive messages in background, simultaneous with the entry or editing of text. This feature increases the total throughput of a system.

CONDITIONAL SALE — A type of Financial Lease under which the customer acquires title to the equipment. Part of the monthly rental will be applied towards the total price of the equipment, with a nominal end-of-lease purchase price being employed to conclude the arrangement. For tax purposes, the conditional sale is treated as a purchase. Conditional sales may also be termed rent-purchase or lease-purchase plans, and are available from manufacturers and third party lessors.

CONFIGURATION — The components which make up a word processing system. Most systems include a keyboard for text entry, a form of magnetic storage (such as cards, cassettes, or diskettes), and a printer for output. A number of systems also include a video display (from less than one line to a full, legal-size page) to view text entry, editing and system status. Some systems may include a minicomputer, and a number of special peripherals (OCR, line printer, computer tape, etc.).

CONNECT TIME — Elapsed time during which a terminal or communicating word processor is connected to, and functioning as a station of, a computer.

CONTENT SEARCH — The ability of a word processing system to search through text to match a group of characters.

CONTINUOUS FORM — A supply of paper made up of numerous individual sheets separated by perforations and folded to form a pack. Sprocket holes are punched in the margins to permit automatic feed through a printer.

CONTINUOUS LOOP RECORDER — See Endless Loop Recorder.

CONTROL CHARACTER — A coded character which does not print but initiates some kind of machine function such as a carrier return.

CONTROL CHARACTER PRINTOUT — The ability of the system to provide a printout showing all normally concealed control characters (required carriage returns, indent commands, etc.); line numbers may also be shown on such a draft printout.

CONTROL CODE DISPLAY — The ability of a word processor to display instructions, commands, or codes on the video screen. In some systems the operator may choose between displaying text with codes, or text-only as it will appear on printout.

Glossary

CONVERSATIONAL MODE — Communication between a terminal and a computer in which each entry from the terminal elicits a response from the computer and vice-versa.

CONVERTER — See Media Converter.

CORE — Usually employed to denote the storage size of computer (CPU) core memory.

COROTRON — In an electrostatic printer, an electrostatic charging device, usually composed of a taut wire, which charges a photoconductor to facilitate imaging in the printing process. Three types of corotrons, or coronas, are generally employed in a photoconductor imaging system; *Charge Corotron*, which charges the surface of the drum positively, preparing it to attach negatively charged toner particles; *Transfer Corotron*, which carries a much higher positive charge than the drum and causes toner to be transferred to the surface of the copy paper; *Clean Corotron*, which emits a negative charge to neutralize the drum charge and prepare it for cleaning. See Electrostatic Process; Photoconductor.

CORRESPONDENCE SECRETARY — Word processing operator.

CP/M — Control Program for Microcomputer, an operating system developed by Digital Research.

CPS — Characters Per Second. A unit of measure equal to the number of characters an output device is capable of printing in one second.

CPU — Central Processing Unit. The heart of a computer that controls the interpretation and execution of instructions.

CROSSFOOTING — The addition, horizontally of rows of numbers, with the sum placed at the last position on the line.

CRT — Cathode Ray Tube, a TV-tube-like device used to display text.

CRT FLYING SPOT SCANNER — A type of scanning mechanism that utilizes a CRT-generated beam of light to raster-scan a stationary document mounted on a flat-bed platen. Through lens optics the reflected beam of light is focused onto a photomultiplier and converted into an electrical signal. High resolution is a primary characteristic of this method.

CURSOR — A lighted indicator that marks the current working position on a display.

CURSOR POSITIONING — Describes the motion of a cursor on a display. Most systems employ a series of arrow keys for up, down, left, and right movement. Some systems use a Home key to position the cursor at the

upper-left corner of the screen. Some systems use a code key plus alphanumeric or function keys for cursor movement. A number of systems only permit cursor movement horizontally, along a fixed line.

CYLINDER PRINTER — A type of impact printer which employs a complete character set embossed on a series of rings around a small cylinder. The cylinder is rotated and shifted up and down to position each character as needed, while a hammer strikes the cylinder, and presses it against a ribbon which creates an image on the page.

DAA — Data Access Arrangement. A direct interface attachment that connects a data communications device to a telephone line. The DAA is a permanent attachment, and protects the public telephone network from a sudden surge of power or interference from a data communications device.

DAISYWHEEL — The print element for a daisy wheelprinter, such as those offered by Diablo and Qume. Print wheels are interchangeable, allowing the operator to select an appropriate font. See Element Printer, Impact Printer.

DAISYWHEEL PRINTER — An interchangeable element electronic impact printer, offering faster print speeds than a Selectric typewriter-printer. See Element Printer, Impact Printer.

DATA BASE — A nonredundant collection of interrelated data items processable by one or more applications. Nonredundant means that individual data elements appear only once (or at least less frequently than in normal file organizations) in the data base. Inter-related means that the files are constructed with an ordered and planned relationship that allows data elements to be tied together, even though they may not necessarily be in the same physical record. Processable by one or more applications means that data is shared and used by several different subsystems.

DATA BASE MANAGEMENT SYSTEM — a systematic approach to storing, updating and retrieving information stored as data items, usually in the form of records in a file, where many users access common data banks.

DATA COMMUNICATIONS — The transmission and reception of encoded information over telecommunication lines.

DATAPHONE DIGITAL SERVICE — DDS is an all-digital transmission service offered by Bell Telephone. Through the direct connection of digital devices the need for special digital-to-analog modems is eliminated.

DATA PROCESSING — The execution of a programmed sequence of operations upon data. A generic term for computing in business situations and other applications with machines such as bookkeeping machines, digital computers, etc.

Glossary

DECIMAL TAB — See Automatic Decimal Tab.

DDD — See Direct Distance Dialing.

DDS — See Dataphone Digital Service.

DEBUG — Checking the logic of a software program to isolate and remove any mistakes.

DEFAULT FORMAT STATEMENT — Some systems which employ format statements (information on margin settings, tabs, etc. internally stored for automatic implementation) have a default format setting, with commonly used margin settings and sometimes a tab grid (usually every five positions). This default setting will be automatically implemented whenever the operator fails to designate a specific format statement.

DELETE CAPABILITY — Indicates the grammatical segments (e.g., character, word, line, sentence, paragraph, page) by which text can be deleted from the storage media (and the display if appropriate).

DEPRECIATION — A method for determining the useful life of a piece of equipment and for costing it over the years of its active usage. The total depreciation expense is equal to the difference between the initial cost of the unit and its estimated Residual or salvage value. When divided over the years of the equipment's usefulness, this periodic expense can be deducted from income taxes each year.

DESKTOP DICTATION UNIT — A type of dictation unit functioning in the classic one-to-one, dictator-to-secretary environment. Each originator has a personal desktop "dictator" (dictation machine) to record messages onto media that is then physically forwarded to a transcriptionist for typing. Desktop units are also utilized as components of work-group units having remote dictate stations on several executives' desks, and recorders usually located at the transcriptionist's desk.

DIAGNOSTIC — Pertaining to the detection, discovery, and further isolation of an equipment malfunction or processing error.

DIAGNOSTIC CODE — An alphanumeric or word display that signals a system condition such as a malfunction. The code is either self-explanatory, or used to refer to further instructions that are explained in an operator guide.

DICTATION SYSTEM — See Central Dictation System, Desktop Dictation Unit, Portable Dictation Unit.

DIELECTRIC PROCESS — A non-impact printing technique in which specially treated paper consisting of a conductive base layer coated with a non-conductive thermoplastic material is used to hold an electric charge applied directly by a set of electrode styli. The electric charge corresponds to the latent image of the original. Following the charging step, the paper is imaged via a

toner system similar to that of other electrostatic copying devices. This technique is sometimes called electrographic, and is currently employed on general purpose non-impact printers, facsimile devices and some photocopiers. See Electrostatic Process.

DIGITAL — Pertains in general to information represented by a code consisting of a sequence of discrete elements. Also, a type of facsimile equipment which utilizes a digital transmitter to reduce the time required to send a document by eliminating redundant image data, i.e. the blank areas of an original. As a document is scanned, the unit employs run-length coding to assign brief on-and-off digital bit patterns to various types of picture elements and white spaces. Because the digital codes are more compact than the continuous stream of electrical signals associated with analog systems, scanning, transmitting and printing times are decreased.

DIRECT DISTANCE DIALING — The facility used for making long distance telephone calls without the assistance of a telephone operator. DDD is frequently used to mean the switched telephone network.

DIRECT ENTRY TYPESETTER — The direct inputting of format and text material to a photocomposer via an integral keyboard arrangement, usually accompanied by some type display. The term is synonymous with Direct Input.

DIRECT INPUT TYPESETTER — The direct entry of format and text material to a photocomposer via an integral keyboard arrangement, usually accompanied by some type of display. The term is synonymous with Direct Entry.

DIRECTORY — See Index.

DIRECT REVERSE SEARCH — The ability of a system to search backward through a storage medium without having to first return all the way to the beginning of the medium and search forward.

DISCRETE MEDIA — Individual magnetic tapes, belts, or disks that can be removed from a dictation unit.

DISCRETIONARY HYPHEN — A semi-permanent hyphen inserted by the operator in words that may require a hyphenation decision. Upon printout, the word processor can use any hyphen, or ignore it if no hyphen is required. Also called ghost or soft hyphen.

DISK — See Magnetic Media.

DISKETTE — See Magnetic Media.

DISPLAY BUFFER MEMORY — Size of the buffer holding characters displayed on the screen; total size may be larger than the number of characters actually displayed to allow a partial-page screen to scroll through a page or more of text.

Glossary

DISPLAY HIGHLIGHTING — The ability of the word processor to intensify or blink certain portions of the display screen — either the characters themselves or the screen area behind the characters — to emphasize a text segment designated for some special activity such as delete or move.

DISTRIBUTED LOGIC WORD PROCESSING SYSTEM — A multi-terminal (station, keyboard, etc.) system which shares peripherals and sometimes storage, but where computing power (logic) is dispersed among individual stations or systems components. See Shared System.

DOCUMENT ASSEMBLY/MERGE — A word processing feature by which a system can assemble new documents from previously recorded text. Most systems can combine prerecorded text with keyboarded text. Many systems can combine selections from prerecorded text to form a new document. Also describes the system's ability to join a document to such variable information as names and addresses to create a number of nearly identical documents.

DOT MATRIX — A method of display character generation in which each character is formed by a grid or matrix pattern of dots.

DOUBLE DENSITY — Term describing the storage of information on a floppy diskette such that the capacity is twice that of a standard diskette. This is accomplished by either doubling the number of tracks per inch, or doubling the serial bit density, or a combination of both.

DOUBLE SIDED DISKETTE — A type of diskette that utilizes both of its sides for the storage of information. A double sided diskette can be loaded into a floppy disk drive with a dual read/write head assembly; or used on a standard single-head drive, taken out, flipped and reinserted for read/record operations on both sides. Also called a "floppy."

DOWNTIME — The period of time during which a system is malfunctioning or not operating correctly because of mechanical or electronic failure.

DP — Data processing. See Data Processing.

DRUM PRINTER — A type of printer that employs a rotating cylinder. A complete set of characters is embossed on the circumference of the drum for each print position. A set of hammers are used to strike the drum (through the paper and ribbon) and print the required character each time the drum rotates.

DSK — Dvorak Simplified Keyboard. A keyboard arrangement first patented in 1932 by Dr. August Dvorak of the University of Washington in Seattle. This keyboard arrangement claims a faster productivity over the conventional QWERTY keyboard arrangement.

DUAL COLUMN — The ability of a word processing system to allow text formatted in a single column block to be reformatted into two side-by-side columns. Dual column capability also may implicitly refer to some degree of text entry/manipulation capability within each individual column without affecting the other column except in a readjust procedure.

DUPLEX — In communications, the ability to send and receive information simultaneously. Also referred to as full duplex. In printing/copying, a print/copy with images on both sides of the paper made by the electrostatic process. This is accomplished by the manual or automatic refeeding of one-sided copies through the exposure process with the second image (second original) being fused to side two of the paper.

EBCDIC — Extended Binary Coded Decimal Interchange Code. An eight-bit code originated by IBM that can accommodate 256 characters.

EDP — Electronic data processing. See Data Processing.

EDITING — Revising text with a word processor to create an updated document.

EIA INTERFACE — A standardized set of signal characteristics (time duration, voltage, and current) specified by the Electronics Industries Association for connection of terminals to modem units, and specific physical coupler dimensions specified by the Electronic Industries Association.

ELECTROLYTIC PROCESS — A facsimile printing process employing a moist, electrolyte-impregnated rolled paper. The current (signal) is applied by feeding the paper between a stationary contact and a revolving drum with a helical contactor. The revolving of the drum causes the point of electrical contact between the blade and helical wire to move laterally across the paper, one line per revolution. As the electrical current passes through the paper it causes a dark change of coloration at all points of contact.

ELECTRONIC KEYBOARD — Refers to a keyboard that is used to generate characters through electronic means rather than through mechanical linkages.

ELECTRONIC MAIL — The generation, transmission and display of business correspondence and documents by electronic means.

ELECTRONIC TYPEWRITER — A class of office keyboard equipment that take their place squarely between office electric typewriters and word processors. Electronic typewriters are relatively inexpensive (\$2,500 and under); compact, utilizing about the same amount of space as an electric typewriter; and offer a full range of features that facilitate text input, though having limited text editing capabilities. As such, these devices are expected to make inroads in traditional office environ-

Glossary

ments that currently use single element electric typewriters, a market largely dominated by IBM with their Selectric typewriter family.

ELECTROPERCUSSIVE PROCESS — A facsimile printing process whereby the facsimile receiver employs a sheet of copy paper covered with a carbon sheet and is mounted on a printing cylinder. As the drum rotates, a single stylus strikes the carbon set with each incoming electrical signal from the transmitter. The force of the stylus causes a carbon mark to appear on the copy paper; by transversing the length of the cylinder, the stylus imprints the entire image of the original.

ELECTROSENSITIVE PROCESSOR — A facsimile printing process whereby imaging is based on a two-layer paper composed of a white titanium oxide coating and dark underlayer. The paper, which may be sheet or roll-fed, is imaged via contact with an electric stylus; as the charged wire touches the paper, the white coating is burned off line by line to correspond to the dark image areas of the original.

ELECTROSTATIC PRINTER — A non-impact printing technique that is similar to the technology employed in typical office copiers, which forms a copy by attracting toner particles to a static charge on the surface of a photoconductor, then transferring the toner image to the surface of a sheet of copy paper. In the normal office copier, the charged image (latent image) of the original document is formed on the photoconductor simply through exposure of the photoconductor to reflected light from the document. In an electrostatic printer, the image is formed by a light-source (i.e. a laser) which "builds" a static image charge on the photoconductor according to information being supplied through the input data stream. Each bit of data can be related to a character shape in the memory of the printing system, and in most cases characters are formed by a dot matrix method similar in concept to that of the matrix printer. Paper can be sheet-or roll-fed.

ELECTROSTATIC PROCESS — A copymaking process in which the reflected image of an original document is converted into a static charge that is used to attract toner imaging material to the surface of a copy sheet. In plain paper copying, the process involves the following fundamental steps: charging of the photoconductor by a corotron; exposure of the original during which the image area absorbs the light and the non-image area reflects light; transfer of reflected light via mirrors and a lens to the surface of the photoconductor, leaving a static charge (latent image) which corresponds to the image area of the original; attraction of toner particles to the latent image area on the surface of the photoconductor; transfer of the toner from the photoconductor to the surface of the paper via a transfer corotron; neutralizing of the remaining photoconductor charge by a cleaning corotron and the removal of excess toner. In the coated paper process the copy paper itself acts as the photoconductor, eliminating the need for a charged intermediate as in the plain paper

process. See Coated Paper Process; Corotron; Photoconductor; Plain Paper Process; Toner.

ELEMENT — Refers to the interchangeable type font of some impact printing devices; for example, the IBM Selectric "golf ball", Qume or Diablo daisy wheel, NEC Spinwriter "thimble".

ELEMENT PRINTER — A class of impact printers which generate copy via interchangeable "elements" that each contain a full set of characters. Characters are formed when the element strikes the paper itself through an ink ribbon. Commonly used element types are "golf-ball", daisy wheel, and "thimble".

ELITE TYPE — A twelve pitch (12 characters per horizontal inch) typewriter setting. Also, a specific type face.

EMULATION — The imitation of one system's code set by another such that the two may communicate. For instance, a system with TTY emulation appears like a teletype system when communicating with another teletype. A system that emulates another system can, in a communications session, accept and process the same data as the imitated system.

ENDLESS LOOP RECORDER — A dictation system in which a non-removable magnetic tape is sealed in a "tank" and loops around constantly. Also see Central Dictation Systems.

END-OF-PAGE STOP — A feature which stops the printer when it has finished printing a page of text. Usually employed to allow the operator to change paper or printer settings, or to allow the next document to be processed.

EQUITY — Credit that is accrued from monthly rental or lease payments towards the eventual purchase (if desired) of the leased equipment.

ERGONOMICS — The study of equipment design for the express purpose of reducing operator fatigue and other forms of discomfort, both psychological and physiological, in a man/machine environment.

EUROPEAN PAPER SIZES — Common paper sizes employed in Europe and Japan. They are designated as sizes A3 (11.7" x 16.5"); A4 (8.3" x 11.7"); A5 (5.8" x 8.3"); B4 (10.1" x 14.3"); B5 (7.2" x 10.1"); and B6 (5.1" x 7.2").

EXCEPTION WORD DICTIONARY — A list of stored words that the word processing system utilizes to perform hyphenation decisions.

FACSIMILE DEVICE — A machine employed to relay alphanumeric and graphic data to distant sites along telephone or transmission lines, or via radio and microwave communication links. A facsimile unit creates a copy in the same manner as an office copier, except that the "original" to be copied is received electronically,

Glossary

usually over a phone line. On the transmission end, the original is scanned, converted into electrical signals then sent to a remote site where a similar device receives the data and makes a hard-copy from it. See also, Group 1, Group 2, Group 3, Group 4.

FEASIBILITY STUDY — An investigation of the advantages and disadvantages of using an alternative approach over the presently used approach. In word processing, a study conducted to determine whether it would be advantageous to convert to word processing.

FIELD — A unit of information within a record that serves a similar function in all records of that group. (e.g. a personnel record contains a name field, address field, salary field, etc.)

FILE — In word processing, a segment of text that is callable from storage and is usually one document long. In records processing applications, an organized, named collection of records treated as a unit.

FILE MAINTENANCE — The activity of keeping a file up to date by adding, changing, or deleting information.

FILE ORGANIZATION — The manner in which files (text segments of paragraph, page, document or other length) are arranged or formatted and may be accessed on storage media. Also details whether there is an index created automatically for stored text, and whether this index is accessible on the display and via printout.

FILE SELECT — See Automatic File Select.

FILE SORT — See Automatic File Sort.

FINAL COPY — A completed (presumably perfectly typed) document.

FINANCIAL LEASE — A financing method in which the customer pays monthly rentals to a lessor that in total exceed the purchase price of the equipment involved; the additional cost to the customer representing the lessor's profits and expenses. The customer is responsible for machine maintenance, sales taxes and insurance. Also called a full pay-out lease. Financial leases may also be classified as being True Leases or Conditional Sales.

FIRMWARE — A term related to specific software instructions that have been more or less permanently placed into control memory. An extension to a computer or word processor's basic command (instruction) repertoire to create a user-oriented instruction set; this instruction set is done in read-only memory, not in software. The read-only memory converts the extended user-specific instruction to the basic instruction of the system.

FIRST LINE FORM ADVANCE — A forms feeding device attached to the word processor that can be instructed to automatically advance to the top (first line) of

the next form at the completion of a document. This avoids the need to record keystrokes for multiple line advances.

FLEXIBLE DISKETTE — See Magnetic Media.

FLIPPY — A double-sided diskette.

FLOPPY DISKETTE — See Flexible Diskette under Magnetic Media.

FLUSH LEFT — A term that describes a block of text that has an evenly justified left margin.

FLUSH RIGHT — A term that describes a block of text that has an evenly justified right margin.

FONT — A character set in a particular style and size of type, including all alpha characters, numerics, punctuation marks and special symbols.

FONT DISC — An imprinted glass disc employed to store character fonts in a phototypesetter.

FONT MASTER — On a photocomposer, the configuration used to store the character fonts, which may include glass font disc, film strip (on a revolving drum), grid matrix, or other less common varieties. A single font master may contain more than one font type.

FONTS ON-LINE — The total number of fonts which may be loaded at one time for automatic access on a photocomposer.

FOOTER — Information printed consistently at the bottom of each page of a multi-page document.

FOOTING — Adding fields of information vertically.

FOOTNOTE TIE-IN — See Automatic Footnote Tie-In.

FOREGROUND PROCESSING — A word processing job application such as communications or printing, that takes place such that the system remains dedicated to performing that function and cannot be employed to perform another task. Contrast with Background Processing.

FORMAT — A contraction meaning the FORM of MATerial, designating the predetermined arrangement of text/data for output.

FORMAT STATEMENT — Embeds format information with text. The format statement may include such parameters as margin and tab settings, decimal tab settings, centering instructions, paragraph indentations, line spacing, pitch size, etc. Some systems have an automatic or default format which is used whenever the operator fails to specify a format. Some systems allow only one format per document or per page. Other systems allow the operator to change formats and automatically call up

Glossary

various formats as desired. Some systems employ a Format Menu or list instead of a format statement for the document. This is generally stored separately and displayed separately from the document itself.

FORMS FEED — Refers to a pinfeed platen or forms tractor device to handle continuous paper for automatic printout.

FORMS INPUT — Filling in a form, by spacing automatically from field-to-field with a carrier return or other single action. A few systems define fields as all numeric or all alphabetic, and reject incorrect entries.

FORTRAN — A high-level computer programming language, suitable for scientific applications.

FULL DUPLEX — A communicating word processor's ability to send and receive text simultaneously. Also called Duplex.

FULL PAY-OUT LEASE — See Financial Lease.

FUNCTION KEYS — Keys on a keyboard or a control panel which when depressed activate a particular machine function.

FUSER — In the electrostatic process, the means by which toner is permanently fixed to a sheet of paper by heat and/or pressure rollers. See Electrostatic Process.

GALLEY PROOF — Columnar printout of draft copy used for proofreading.

GASP — See Gas Plasma Display.

GAS PLASMA DISPLAY — A video display screen employing a gas plasma or discharge technology, characterized by an exceptionally clear, flicker-free image.

GHOST HYPHEN — See Discretionary Hyphen.

GLOBAL SEARCH AND REPLACE — The ability of a system to search for repeated occurrences of a character string (typically up to 32, 64 or 128 characters long). In some instances, the system can automatically delete all occurrences of a string or replace all occurrences of one character string with another character string. In other cases, the system merely locates the string for operator-selected deletion or replacement. A few high-powered systems can apply logical considerations to making the replacement or perform multiple searches simultaneously.

GOVERNMENT SIZE — Paper sheet sizes commonly used by the U.S. government. They are 8" x 10½" (letter) and 8" x 13" (legal).

GRADE — The quality of paper as determined by the components of the stock (wood fiber, cotton fiber, etc.) and the consistency of processing.

GROUP 1 — CCITT classification of analog facsimile devices which operate at the speed of 6 minutes using FM modulation. A 4-minute speed is also included in this category as a manufacturer's option.

GROUP 2 — CCITT classification of analog facsimile devices which operate at a speed of 3 minutes using AM modulation. A 2-minute speed is also included in this class as a manufacturer's option.

GROUP 3 — CCITT classification of digital facsimile devices which operate at 1-minute speeds and employ run-length coding of image material to perform redundancy reduction. These machines may also utilize bandwidth compression to enhance speed.

GROUP 4 — CCITT classification of special types of high-speed (56Kb per second) machines with wide scanners used for the transmission of large documents.

GLOSSARY — See Term Dictionary/Glossary.

HALF DUPLEX — The sending or receiving of text by a communicating word processor in one direction at a time.

HANDSHAKE — In communications, a preliminary exchange of predetermined signals performed by modems and/or terminals to verify that communication has been established and can proceed.

HARD COPY — Machine output in a permanent, visually readable form for human beings; for example, printed reports, listings, documents, and summaries. The term has gained significance in light of the use of magnetic records which cannot be read by humans and require processing for conversion to printed records; or CRT display which are transient.

HARD SECTORED — A term used to describe a particular diskette format, and a way of recording information on the diskette. Hard sector diskettes employ a single index hole placed between any two of 32 equidistant sector holes. The index hole is used to designate the beginning of the disk; the sector holes designate the location of information on each disk. Since hard sector diskettes are not preformatted they have more potential storage capacity than the soft-sectored variety, employing up to 300K bytes out of a possible 400K for text storage.

HARDWARE — The mechanical or electronic equipment which is combined with software (programs, instructions, etc.) to create a word processing system.

HARDWIRED — A WP system employing wired circuitry to implement system functions. Such equipment is generally cheaper than software programmed systems; it is also less flexible.

HEAD — See Read/Write Head.

Glossary

HEADER — Information printed consistently at the top of each page of a multi-page document.

HEADERS/FOOTERS — See Automatic Headers/Footers.

HIGH LEVEL LANGUAGE — A programming language that allows the programmer to express operations in a form that is closer to the normal human language representation of the procedures the computer is to perform. Common examples are COBOL (for business applications), FORTRAN (for mathematical work), and BASIC (an easy to use language). See Compiler, Machine Language.

HIGHLIGHTING — The ability of a display-based word processor to intensify, blink or create a reverse video image on the display to emphasize a text segment designated for some system activity such as delete or move.

HORIZONTAL SCROLLING — Ability of a display-based system to move horizontally along a line of text to access more characters than may be shown on the screen at one time. Several methods may be used. The system can move horizontally across the line, adding one character at a time, or it may display the text as overlapping left, center, and right segments, etc. Some systems display wide lines by condensing character size so that a large number of characters may be displayed.

HOT ZONE — A sometimes adjustable area at the right-hand margin, controlling placement of the last word on a line of text. Most systems wrap any word which will not fit within the Hot Zone to the next line; others stop for a manual hyphenation decision. See Hyphenation.

HYPHENATION — Techniques employed on or by a word processing or photocomposition system to perform line ending decisions. Common hyphenation procedures include Manual Hyphenation where the operator assigns the hyphen position; Hot Zone Hyphenation, where any word that enters but does not fit within a pre-defined end-of-line space must be either manually hyphenated or moved to the next line; and Scan, where the system indexes through the text and stops at any place where a hyphenation decision is required. Some systems perform no hyphenations (hyphenless justification), but wrap any word which will not fit entirely on one line to the next line; generally, the operator can override this wrapping and perform a manual hyphenation to maintain tight lines. Discretionary hyphenation requires that the operator key-in hyphens at appropriate break points in long or complicated words. The hyphen is recorded by the operator, usually during the initial keyboarding, and is used during subsequent processing only if the word appears at the end of a line; the system will then use one of the discretionary hyphens at the end of the line, justify the line, and move the remainder of the word to the beginning of the next line. More sophisticated systems may use an algorithm (formula) to make hyphenation decisions, or may store a dictionary of hyphenations and to hyphenate automatically.

HYPHENLESS JUSTIFICATION — See Hyphenation.

IMPACT PRINTER — Any type of printer that generates characters by using some form of stamping or inking through a ribbon by some sort of character slug, element, or hammer-needle. See Band Printer, Chain Printer, Cylinder Printer, Drum Printer, Element Printer, Matrix Printer.

INDEX — A list of documents contained on a unit of storage media (e.g., a diskette). Also, a list of documents being manipulated (such as in a printout queue).

INDEX OF COOPERATION — In facsimile, the length of an individual scan line. To reproduce a document precisely, the index of cooperation should be the same for the two communicating machines.

INFORMATION — The meaning derived from the relationship among symbols (words, data).

INFORMATION PROCESSING — A term that encompasses both word processing and data processing which is used to describe the entire scope of operations performed by a computer.

INFORMATION SYSTEM — A group of computer-based systems and data required to support the information needs of one or more business processes.

IN-HOUSE PRINTING — See In-Plant Printing.

INK JET PRINTER — A non-impact printing technique which utilizes droplets of ink to form copy images. As the print head moves across the surface of the copy paper it shoots a stream of tiny, electrostatically charged ink drops at the page, placing them precisely to form individual print characters.

IN-PLANT PRINTING — Production of documents by printing or duplicating methods within the user organization, rather than by a separate printing concern. Often used to refer to an in-house facility that has photocomposition capabilities.

INPUT — The data or text to be processed. Also, the transfer of data or text to be processed via a keyboard or external device to an internal storage device.

INPUT DEVICE — A device such as a CRT/keyboard, OCR Scanner, etc., which converts data from the form in which it has been received into electronic signals that can be interpreted by a word processor.

INPUT MEDIA — The various forms and methods of inputting material to a photocomposer for typesetting, including Direct Input, Paper Tape, Magnetic Media and some special applications such as Unjustified Paper Tape and Wire Service Tape.

INPUT UNDERLINE — See Automatic Input Underline.

Glossary

INTEGRAL KEYBOARD — A word processor or photocomposer with a built-in keyboard for text and command input purposes.

INTEGRATION — A term used to describe the phenomenon whereby different computer-based functions such as word processing, data processing, and telecommunications are capable of being performed by one system.

INTELLIGENT TERMINAL — A terminal with some logical capability; a remote device which is capable of performing functions upon input or output data.

INTERACTIVE — Pertaining to an application in which each entry elicits a response. An interactive system may also be conversational, implying continuous dialog between the user and the system.

INTERACTIVE OPERATION — On-line operation where there is a give-and-take between person and machine. Also called "conversational" mode.

INTERCHARACTER SPACING — Placing white space between the characters of individual words in order to create a justified (even left-and right-hand margins) column of text. Some systems have very sophisticated schemes, with spacing assigned according to character width (even with non-proportionally-spaced fonts), creating a print-like appearance.

INTERFACE — A shared boundary defined by common physical interconnection characteristics, signal characteristics, and meanings of interchanged signals.

INTERPRETER — Software that translates program instructions written in a high-level language such as BASIC, FORTRAN, COBOL, or PL-1 and possesses the ability to execute the instructions, one step at a time. The presence of an interpreter permits a user to execute previously written programs or to develop his own programming.

INTERWORD SPACING — Placing white space between words to create justified, even left- and right-hand margins, columns of text.

INVESTMENT TAX CREDIT — A credit against income taxes as offered by the IRS as an incentive for companies to acquire new equipment. The one-time credit is equal to 7% of the investment if the Depreciation period for the unit is seven or more years; two-thirds of the 7% if the lifetime is between five and seven years; and one third of the 7% if the lifetime is between three and four years.

IWP — International Information/Word Processing Association. The largest professional organization for word processing managers and other word processing professionals.

JUSTIFICATION — In word processing, the ability of the system to produce printout with an even right-hand margin. This may be achieved by interword spacing (leaving extra white space between words), or via intercharacter spacing with proportionally spaced characters which provides output with a more print-like appearance. In photocomposition, the adjustment of a line through word and character spacing so that it will exactly fill a given Line Measure and will have margins (left and right) that are the same as those for other lines in the same measure. See Line Measure.

JUSTIFICATION PRINTOUT — The system printer has the ability to produce printout with an even right-hand margin. This may be achieved by interword spacing (leaving extra white space between words), or via intercharacter spacing with proportionally spaced characters which provides output with a more print-like appearance.

JUSTIFY — To output text with flush left and right margins (and, hence, a more print-like appearance).

K (Kilo) — Abbreviation denoting 1,000 units. Generally used with a numeric prefix. In computerese, denotes 1,024, thus 32K bytes of memory would equal 32,768.

KERNING — In photocomposition, the ability to add or subtract space between characters, and expand or compact the word and line. Also known as mortising, white space reduction or white space expansion.

KEYBOARDING — Entering information to a word processor via a keyboard.

KSR — Keyboard Send Receive.

LASER — Light Amplification by Stimulated Emission of Radiation. A device which transmits an extremely narrow and coherent beam of electromagnetic energy in the visible light spectrum. Lasers have numerous applications in many fields; but in the office automation area are already applied in communications, facsimile, storage, and electrophotographic printing.

LATENT IMAGE — In electrostatic printing/copying, a static charge present on the photoconductor prior to contact with toner particles. See Electrostatic Process.

LEADING — In photocomposition, spacing between lines and paragraphs, expressed in point and half-point values (pronounced ledding). This is one of the primary typesetting control parameters, and refers to the amount of film or photopaper advancement between lines of composed text. See Point.

LEASE-PURCHASE PLAN — A lease plan in which monthly payments are applied towards the purchase of equipment. See Conditional Sale.

Glossary

LED — Light Emitting Diode. A form of display lighting employed on many different types of office and reprographics equipment.

LEDGER SIZE — A sheet size commonly used by business for accounting purposes: 10" x 14" or 11" x 17".

LEGAL SIZE — A sheet size corresponding to the standard size of legal briefs, which is 8½" x 14". Legal size has been adopted as a common large size for general business purposes.

LESSEE — The customer or user of a lessor's equipment.

LESSOR — The owner of the equipment that is being leased; usually a third party who purchases the item from the original manufacturer, and then offers it to a user for a monthly rate.

LETTER QUALITY PRINTER — A printer that generates output such that it is suitable for high quality business correspondence. Term implies that output quality matches that of a standard office electric typewriter.

LETTER SIZE — The common letter sheet size used by business: 8½" x 11".

LETTER SPACING — See Kerning.

LETTER WRITING — See Automatic Letter Writing.

LINE JUSTIFICATION DISPLAY — The ability of a word processor display to show justification (even right-hand margin). Most display screens show this via interword spacing (extra "white" space between words). A few displays have a proportionally spaced character set, and can display justified lines of proportionally spaced characters with justification occurring via intercharacter spacing.

LINE MEASURE — The width of a line of text, on a composed page expressed in picas. See Pica.

LINE PRINTER — A computer or word processing output peripheral which operates at a very high speed to print what appears to be one full line at a time; with matrix printers this is accomplished through several sweeps of the print head.

LINE SPACING — See Automatic Line Spacing, Leading, Reverse Leading.

LINE SPEED — The rate at which text is transmitted over a line, expressed in bits per second.

LIQUIDATED DAMAGES CHARGE — A charge levied by a supplier to a customer when the customer cancels a rental contract prior to the agreed term of the plan.

LIST PROCESSING — See Records Processing.

LOAD — In word processing, to feed a program into the system. A common means of loading the program is via a form of magnetic media. The media is inserted into the media drive and the program "read" into the system's memory. Also referred to as "soft loading." See Software-Based.

LOWER CASE — Small type letters in contrast to Capital letters or Upper Case.

LPM — Designates lines per minute relative to composition speed on a phototypesetter.

LQP — See Letter Quality Printer.

LSI — Large Scale Integration. Refers to a microprocessor chip with more than 1000 components.

M (Mega) — Abbreviation denoting 1,000,000 units; 10M bytes denotes 10 Million bytes of storage in "computerese."

MACHINE DIALOG/MENU PROMPT — A number of video display systems allow the operator to enter into a dialog or conversation with the word processor; operator actions are called for by the system in a question-answer mode. This type of dialog can be particularly useful in training new operators, or in helping part-time operators through a job. Some video systems offer Menus which list operator options at each step in the word processing process.

MACHINE LANGUAGE — A binary language all digital computer products must use to perform processing. All other programming languages (BASIC, FORTRAN, COBOL, etc.) must be compiled or translated ultimately into binary code before entering the system. This binary language is used directly by the machine, and is machine language.

MAG CARD — See Magnetic Media.

MAG KEYBOARD — See Magnetic Keyboard.

MAGNETIC BRUSH — In the electrostatic process, a device used to transport toner particles to the surface of the photoconductor. A brush is mounted on a roller mechanism. As it turns, its magnetic pull attracts toner particles and carries them to the drum surface where they are deposited. See Electrostatic Process.

MAGNETIC CARTRIDGE — See Magnetic Media.

MAGNETIC KEYBOARD — A word processor. The term implies that the system is provided with magnetic media to capture keystrokes, to recording text, and to permit revisions.

MAGNETIC MEDIA — A variety of magnetically coated materials used by word processing systems for text and sometimes program storage. Main types of magnetic media include:

Glossary

- **Magnetic Card** — Tab-size card coated with magnetic material, holding about 50 to 100 lines (about 100 characters each) of text and codes. Dual-sided cards are also available (recording on both sides). Another, less frequently used card type is the mag stripe card which holds about a paragraph of text.
- **Cassette** — Magnetic tape loaded into a reel-to-reel cassette with a capacity of approximately 30 text pages.
- **Cartridge** — Magnetic tape loaded into a cartridge (such as the single reel IBM MT/ST cartridge or the reel-to-reel 3M Data Cartridge) that holds multiple pages of text.
- **Flexible Diskette Floppy** — Magnetic coated mylar disk enclosed in a protective envelope. Three basic sizes:
 - Standard diskette: 8" diameter, capacity of approximately 75 text pages*.
 - Mini-diskette: 5¼" diameter, capacity of approximately 15 to 20 text pages*.
 - Micro-diskette: Developed by Sony, enclosed in a plastic case. 3½" diameter, capacity to store 278K characters when formatted (437.5K unformatted).
- **Disk** — Rigid, random access, high-capacity magnetic storage medium. Disks may be removable (cartridges), providing off-line archival storage, or non-removable. Capacities range from 1Mb to well over 300Mb (250 to 750,000 pages*) per disk.
- **Winchester Disk** — Rigid, non-removable, magnetic oxide-coated, random access disk sealed in a filtered enclosure along with the read/write heads and head actuator. Heads fly only about 20 micro-inches from the disk surface, allowing very dense data storage. Common disk sizes are 8" and 14" in diameter. Capacity ranges from 2.1Mb to 64Mb (325 to 16,000 pages*) for the 8" disk, and from 6.5Mb to 635Mb (1,625 to 158,750 pages*) for the 14" disk.
- * *Calculated using 4,000 characters per page, single spaced. Storage capacity can be increased through use of a double density diskette, a double sided diskette, or a double density, double sided diskette.*

MARGIN ADJUST — See Automatic Margin Adjust.

MATRIX PRINTER — An impact printer which uses wire, hammer-like bristles or needles to create characters formed by small dots. Matrix printers produce either serial or line output. The serial printer employs a moving print head with a matrix block (ie. 5 x 7 or 7 x 9) of needles. The print head sweeps across the page to print full characters one at a time. The line printer uses a horizontal band with raised dots which moves from left to right across the paper. The individual needles strike programmed character dots to form one row of dots per sweep across the page. Successive passes of the line printer form complete characters and complete rows of textual data. High

resolution text, comparable to daisywheel output, may be produced by overlapping matrix printers which print characters via a highly concentrated matrix or successive, staggered passes of the print head. Fonts for matrix printers are stored in ROM or PROM memory.

MAXIMUM LINE LENGTH — In typesetting, the maximum width of a line of type which may be set by a typesetter model. This is expressed in Picas and is typically about 45 picas.

MEDIA CONVERTER — A device, or the capability of a word processor, to convert information stored on one type of media to another.

MEDIA-STORED FORMAT — A feature of a word processing system that allows format information (such as tab and margin settings, paragraph indentations, etc.) to be stored on magnetic media with the text and to be used to format text on the display and/or during printout.

MEMORY TYPEWRITER — A typewriter that is capable of storing keyboarded material and playing it back automatically. Memory typewriters generally have some text input features and compete in the low end of the word processing market.

MENU — A list of alternative operator actions, supplied by the word processing system for operator selection. In some cases, the system will require that the operator access some or all functions through the appropriate menu.

MERGE — See Document Assembly/Merge.

MICROPROCESSOR — An integrated circuit which contains the logic elements for manipulating text/data and performing processing operations on it.

MICROWAVE — High radio frequencies, nominally between 1,000 and 200,000 megahertz.

MINI-FLOPPY DISKETTE — See Magnetic Media.

MNEMONIC — The assisting of the human memory. In word processing this refers to a type of command structure the system may employ. A system that utilizes mnemonic commands uses commands that are often abbreviations for the function they implement. For instance, a "CO" command used for a text copy application.

MODEM — Contraction of Modulator-DEModulator. A device which modulates and demodulates signals transmitted over communications facilities; that is, a device used to convert digital signals into analog (voice-like) signals for transmission over a telephone line. At the other end of the line, another modem converts the analog signals back into digital form. A modem is also known as a data set.

MODIFIED HUFFMAN CODE — The run-length code adopted by the CCITT to perform redundancy reduction,

Glossary

which only removes horizontal redundancy from the image. The CCITT is currently studying a two-dimensional run-length code which removes both horizontal and vertical redundancy. See Run-Length Code.

MSR — Marketing Support Representative. IBM term for a person who calls on customers to assist the sales representative in selling word processing equipment, performing vendor feasibility studies, training customer operators, and bringing new applications on-line.

MULTI-COLUMN PAGE DISPLAY — The ability of a word processor to display text or numerics in multiple columns. The system may also have the ability to edit by column. See Column Move/Delete.

MULTI-DROP LINE — A communication system configuration using a single channel or line to serve multiple terminals. Use of this type of line normally requires some kind of polling mechanism, addressing each terminal with a unique identification. Also called a multipoint line.

MULTILEAVING — A technique for allowing simultaneous use of a communications line by two or more terminals.

MULTIPLEXER — A hardware device that allows the transmission of a number of different signals simultaneously over a single channel.

MULTIPLEXING — The division of a transmission facility into two or more channels either by horizontally splitting the frequency band transmitted by the channel into narrower bands, each of which is used to constitute a distinct channel, or by allotting this common channel to several different vertical information channels one at a time.

MULTI-POINT LINE — See Multi-Drop Line.

MULTIPROGRAMMING — A word processing system that can simultaneously process different applications such as file sorting and text editing or even data processing tasks. Systems with such capabilities can process much larger quantities of material and are more cost efficient.

MULTI-TERMINAL SYSTEM — See Shared-Logic Word Processing System and Shared System.

NATURAL LANGUAGE — In word processing, refers to a system whereby functions are implemented through a keyed sequence that may combine verb, noun, and object commands, along with numerics to imitate English language syntax. For example, to delete the ninth paragraph within a document the operator would depress the "Delete + Paragraph + 9" keys. Such systems may theoretically facilitate in the training of operators since the commands employed closely resemble the English language.

NETWORK — See Communications Network.

NON-ADJUST PRINTOUT — The ability of a word processing system to print material with protected (unchanged) line lengths; this is required to retain the format of tables, charts, and other tabular material.

NON-COUNTING — A composition system which does not contain internal logic to perform line justification. The term generally refers to an off-line editing system that is used to compose unjustified text for input to a typesetter. See Justification.

NON-IMPACT PRINTER — A class of printers that form images onto paper without using a form of stamping or inking through a ribbon by an element, character slug, or hammer-needle. The shapes of characters are stored in the system memory of the printer and used to drive the imaging mechanism. See Electrostatic Printer, Electrostatic Process, Ink Jet Printer, Thermal Printer.

NON-SWITCHED LINE — A communications link which is permanently installed between two points.

NON-VOLATILE — A type of memory which holds text/data even if power has been disconnected.

NUMERIC CHARACTER — A character that belongs to one of the set of digits 0 through 9.

OCR — Optical Character Recognition. A device or scanner which can read printed or typed characters and convert them into a digital signal for input into a data or word processor. OCR units in word processing applications usually read special machine-readable type fonts (OCR-A, OCR-B, or the IBM Courier font). The use of such equipment allows an ordinary typewriter fitted with a font to serve as an input station for a word processing system. Pages produced on the typewriters are fed into the OCR and converted into a digital form. Such digitized text may either be entered directly for text edit and format, or stored on mag media for future processing.

OEM — Original Equipment Manufacturer. An OEM may manufacture a product for assembly into another system or larger configuration by another manufacturer or vendor.

OFF-LINE — A word or data processing operation performed on standalone equipment, not being connected to another central processor or computer system.

OFF-LINE KEYBOARD — In typesetting, a keyboard input device that is not directly wired or connected to the typesetting component of a composition system. Text and commands can be entered and recorded off-line for subsequent entry to a typesetting device via a transferable media like paper tape or floppy disc. An off-line keyboard may or may not be capable of performing line justification with text input.

Glossary

ON-LINE — A word or data processing operation which is performed on a local system connected to and sharing the facilities of a remote central processor.

OPERATING LEASE — A short-term lease in which the lessor retains ownership of the equipment. Rates are usually lower than the monthly rentals offered by the manufacturer. Under an operating lease, the lessor does not expect to recover the full cost of the equipment from one customer. Therefore, when a lease expires, the lessor must rely on continuing the relationship with the same user, or find another customer. The rates may reflect the risk involved. Also called a partial pay-out lease.

OPERATING SYSTEM — Software that controls the operation of the word processing system.

OSCILLATING SCAN HEAD — A scanning process that employs an optics/photocell assembly that moves back and forth across the original page as it scans each line. The document is mounted on a semi-cylinder platen which, with each oscillation, moves laterally beneath the scan head.

OUTPUT — The product of an information processing operation, produced via display or a peripheral device such as a printer, communications, mag card reader, etc.

PABX — Private Automatic Branch Exchange. A private automatic exchange that provides for the transmission of calls to and from the public telephone network.

PACKET — A group of bits including data and control elements which is switched and transmitted as a unit. The data is arranged in a specified format.

▲ **PACKET SWITCHING** — A mode of transmission in which a message is divided into fixed-length packets within the network as opposed to message switching systems which route a message in its entirety. Packets are routed over the network under computer control to take advantage of the speed with which shorter messages may be transmitted and reassembled at the receiving end.

PAGE NUMBERING — See Automatic Page Numbering.

PAGE SCROLLING — The ability of the system to "flip" through the pages of a document, usually in both forward and backward directions, allowing access to all text of a multi-page document.

PARALLEL PRINTER — A computer or word processing output peripheral which employs a parallel interface to connect an input terminal. The parallel interface allows the printer to accept transmission of data which is sent in parallel bit sequences.

PAGINATION — See Automatic Pagination.

PARITY BIT — A non-information bit that is used to insure that data has been transmitted accurately; a receiving device counts the 'on' bits of every arriving byte; if odd parity is specified, an error condition will be flagged any time an even number of 'on' bits are detected.

PARTIAL PAY-OUT LEASE — See Operating Lease.

PASSWORD — A unique word or string of characters that a word processing operator must supply to meet security requirements before gaining access to the system. The password is confidential, as opposed to the user identification.

PAX — Private Automatic Exchange. A dial telephone exchange that provides private telephone service to an organization.

PBX — Private Branch Exchange — A manual exchange connected to the public telephone network on the user's premises and operated by an attendant supplied by the user.

PERIPHERALS — Devices (such as printers, OCR readers, and communications) which may be configured with word processing systems as options, extending their capabilities. More sophisticated systems can frequently share a peripheral between multiple stations, making the use of a high-speed printer or other expensive piece of equipment cost-effective.

PHOTOCELL — See Photoelectric Transducer.

PHOTOCOMPOSITION — See Phototypesetting.

PHOTOCONDUCTOR — A metallic substance such as selenium or cadmium sulfide which is capable of conducting and retaining electrical charges. If any portion of a photoconductor is exposed to light, that part will lose its charge. Photoconductive materials are employed in the electrostatic process to retain a latent image (charge) of a document, which is subsequently imbued with toner particles to create an image. See Electrostatic Process.

PHOTO-DETECTOR — See Photoelectric Transducer.

PHOTO-DIODE — See Photoelectric Transducer.

PHOTO-DIODE SENSOR ARRAY SCANNER — A type of scanner that employs a stationary configuration of tiny photo-diodes arranged in a matrix that equals in width one lateral scan line of a document. An original is roller-fed from a flat-bed tray and passes by the sensor array one line at a time. Light is reflected from each line and focused through a lens onto the face of the photodiode array. Each diode acts as an independent photosensor in converting a small picture element into part of the total electrical signal for a scan line.

Glossary

PHOTOELECTRIC TRANSDUCER — Component of a facsimile scanner that receives light and dark image patterns of the original and converts them into electrical signals for transmission over communications lines.

PHOTOGRAPHIC PRINTER — A high-resolution technique of facsimile printing that employs a focused light source to expose photopaper. The photopaper or film is wrapped around a cylinder in a light-sealed box. As the drum rotates, a glow modulator tube converts incoming electrical signals into a light source of variable intensity. The light source moves laterally across the length of the paper, creating one image line with each revolution of the cylinder. The light source varies in intensity with the strength of the electrical current, creating output that closely resembles the finer gradations of light and dark in the original.

PHOTOTYPESETTING — The setting of type via electronic or electro-mechanical optical systems onto photographic paper or film. Input to such devices can be by direct keyboard entry, paper tape or magnetic media. Fonts are contained on reduced character matrices through which light is flashed and focused to expose the photographic medium.

PICA — In typesetting, a unit of measurement equal to 0.166 inch, which is about 1/6th of an inch, or 12 points exactly. See Point.

PICA TYPE — A 10-pitch (10 characters per horizontal inch) typewriter setting. Also, a particular style of type face.

PINFEEED PLATEN — A typewriter or printer platen that employs a sprocket-type pinfeed for the indexing of continuous form paper.

PITCH — Horizontal character spacing at 10 or 12 characters per inch. 10-pitch spacing is called Pica, 12-Pitch spacing, Elite.

PLAYBACK PRINT RATE — The automatic typing speed of the printer. It should be noted that these are maximum speeds for best situations. In actual practice, printers operate at somewhat slower speeds, depending on the amount of white space (as in tabular work or short lines), carriage returns, uni- or bidirectional printing capabilities, and other factors.

PL/1 — A high-level programming language, designed for use in a wide range of commercial and scientific computer applications which has features of FORTRAN and COBOL plus others.

PM — Preventive Maintenance. Precautionary measures taken on a system to forestall failures, rather than to eliminate them after they have occurred, by providing for systematic inspections, detection and correction of incipient problems before they develop into major defects.

POINT — A unit of type measurement equal to .0138 inch or approximately 1/72 of an inch. There are 12 points to a pica. See Pica.

POINT SIZE — The vertical space allocated to a typeface, referred to in the horizontal value of measurement called points. For example, there are 8-point, 10-point and 15-point type sizes. See Point.

POINT SIZE RANGE — The range of operator-selectable type sizes as generated by a photocomposer, which is expressed in point sizes from minimum to maximum. Type size is a function of the photocomposer's optics, which work in conjunction with the font master to either magnify or reduce the size of type required. See Font Master; Point Sizes.

POINT-TO-POINT — A limited network configuration with communication between two terminal points only, as opposed to multi-point and multi-drop.

POLLING — A communications feature that allows one or more stations of a communicating word processing system to check with other systems to see if a message is ready to be sent.

PORT — An input/output channel including the physical connector and control logic to interface a peripheral device to a mainframe.

PORTABLE DICTATION UNIT — A dictation unit designed for in-the-field use. Portable dictation units vary in weight from about one-half pound to two pounds, and come in sizes small enough to fit in a shirt pocket or purse to as big as a cigar box. Recordings are made on magnetic or plastic belts, or on magnetic tape reels, disks, cassettes or micro-cassettes. Each of these media is easily mailed or forwarded back to a central office for transcription on a compatible desktop unit.

POWER KEYBOARD — See Magnetic Keyboard.

POWER TYPING — An application or system that employs word processing equipment. Generally used to describe a low-level application such as typing repetitive letters.

PRERECORDED — Text stored on magnetic media for subsequent payout as part of a repetitive letter or a letter created from Boilerplate. Variable information, either prerecorded or keyboarded, may be combined with such prerecorded text.

PRINTOUT — See Hard Copy.

PRINTOUT QUEUING — A feature which allows a number of documents to be lined up or queued for subsequent printout while the operator goes on to perform other tasks. Such printout queuing may be quite primitive, employing only a single printer and handling one page or one document at a time. Other queuing may be very

Glossary

sophisticated, with multiple printers and print queues for each printer, capable of processing large documents or allowing multiple documents in the queue. Some systems also allow documents to be deleted from the queue and/or priority documents to be processed ahead of a normal first-in, first-out queue.

PRINT SUPPRESSION — Control codes entered during text entry/editing such that designated portions of text will not print during playback.

PRINTWHEEL — See Daisywheel Printer, Element Printer.

PROCESSOR — A computer or part of a computer capable of receiving data, manipulating it and supplying results.

PROGRAM — A set of instructions arranged for instructing a word processor or computer to perform a desired operation.

PROM — Programmable Read Only Memory. Refers to the solid state memory for storing programs which a vendor company can program to customize a system before delivery to the user. Generally, PROM cannot be altered once it has been programmed.

PROMPT — A reminder(s) usually implemented via display that assists the word processing operator in performing a function.

PROPORTIONAL SPACING — Typed, printed or displayed text where each alphanumeric character is given a weighted amount of space. For instance, an "I" might be two units wide, an "L" four units wide, and a "W" five units wide. Such output has a print-like appearance, especially when combined with a character spacing scheme employing sophisticated intercharacter spacing.

PROTOCOL — A formal set of conventions governing the orderly exchange of information between communicating devices by defining such things as connection establishment, security provision, data sequencing, error control, etc. Protocols achieve efficient line utilization by reducing the amount of information transferred by distinguishing between device control information and data.

QUALITY PRINTER — See Letter Quality Printer.

QUEUE — Storage areas within a computer-based word processing system, with each item in storage linked to the items before and after it to form a queue or line. Queues are usually created to permit an individual operator to send text to be processed (for such functions as data communications or printout) and to then continue to perform other work rather than waiting for access to the appropriate function or peripheral.

QWERTY KEYBOARD — A standard typewriter alphanumeric keyset, as carried over from the printing industry, named for the first six keys of the third row from the bottom.

RAGGED LEFT/RIGHT — Refers to ragged, or uneven, non-justified, right or left margins.

RAM — Random Access Memory. Storage or memory which allows data (such as documents) to be stored randomly and retrieved directly by an address location. The system accesses the addressed material, with no need to read through intervening data. Information may be retrieved more speedily from random access memory than from serial media such as tape.

READ/WRITE HEAD — The mechanism which writes data to or reads data from a magnetic recording medium.

RECORD — A collection of related items of data (fields) treated as a unit.

RECORDER — A component of a dictation system that records the dictation onto magnetic media.

RECORDS PROCESSING — Refers to the manipulation of files of information, such as selecting from certain fields, and resequencing files into different categories; and the generation of reports from massaged fields of data.

REGISTER — A special section of main memory where data is held while it is being worked on.

REMOTE ACCESS — Pertaining to communication with a computer processor by terminal stations that are distant from that processor.

REMOTE BATCH — A method of entering jobs into the computer from a remote terminal for processing later in a batch processing mode. In this mode, a plant or office, geographically distant from the central computer can load in a batch of transactions, transmit them to the computer and receive the results by mail, or via direct transmission to a printer or other output device at the remote site.

RENT-PURCHASE PLAN — A rental arrangement in which a certain percentage of monthly rental payments can be applied to the eventual purchase of the equipment. See Conditional Sale.

REPAGINATION — See Automatic Repagination.

REPEATING KEY — A typewriter key which continues typing (or recording) as long as it is depressed. Also called a typamatic key.

RESIDUAL VALUE — The value of a piece of equipment at the end of a lease term.

RESPONSE TIME — The time a system requires to respond to an operator command in supplying stored data or completing a processing cycle.

Glossary

REVERSE LEADING — The ability of some phototypesetters to allow the reverse movement of the photographic medium once material has been typeset. This permits the setting of side-by-side columns on the actual composed page as well as other special effects. In practice, the operator may compose one complete left column, then through reverse leading (pronounced ledding) backup the photopaper in order to compose a right-hand column alongside the left column.

REVERSE SEARCH — See Direct Reverse Search.

REVISION AND STATUS REPORTING — The ability of a word processor to automatically create an index, listing the documents stored on a tape, diskette, or disk. In some cases, the index may be used as a status report, and may show such entries as the date on which the document was created, the last date on which the document was accessed and/or revised, the number of revision accesses which have occurred, and so forth. Some systems can sort indexes by Author, Department, Operator, etc., and print a status report.

RJE — Remote Job Entry. Input of a batch job from a remote site and receipt of the output via a line printer or card punch at a remote site. The technique allows various systems to share the resources of a batch oriented computer by giving the user access to centrally located data files and access to the power necessary to process those files.

▲ **RO (Receive Only)** — A communicating device that operates in a receive mode only.

ROM — Read Only Memory, a solid state memory for programs that is inflexible and cannot be altered.

ROTATING CYLINDER SCANNER — Common type of facsimile transmitter in which the original is mounted around a cylindrical drum and scanned by an optics/photocell assembly (scan head) parallel to the length of the cylinder. The drum rotates and the scan head moves across the document, scanning one line width per revolution.

ROTATING HELICAL APERTURE SCANNER — A type of facsimile transmitter fairly common on low- to mid-volume fax units. The original is roller-fed over a flat-bed copy platen and illuminated by an area lamp. Lens and mirror optics reflect and focus one scan line of the moving document at a time first through a fixed horizontal slit aperture, and then through a rotating helical aperture. The rotating of the helical aperture produces one lateral scan of the original per revolution, with the passing light being focused a final time onto a photocell for conversion to an electrical signal.

ROTATING LENS TURRET SCANNER — A facsimile transmitter employing a scan head composed of a stationary mirror surrounded by a rotating turret of lenses. The original is mounted on a moving semi-cylinder platen that feeds the document as it is scanned one line at a time.

While rotating, each lens focuses scan lines onto the mirror, which in turn projects the light through an aperture and onto a photocell.

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RUN-LENGTH CODE — A method of redundancy reduction (data compression) utilized by digital facsimile transmitters to enhance speed. When image patterns of an original are converted into digital signals, all black and white areas on a page are reported as a series of ones (black) and zeros (white). The number of white spaces between black elements (number of zeros between ones) are assigned a number, or run-length code. Each time a space is encountered the unit assigns a short code to represent it rather than reporting all of the individual white spaces (zeros), and the most frequently used run-length codes are given the shortest binary numbers. Run-length coding may be performed horizontally across the width of the page (one-dimensional system) or vertically as well (two-dimensional system).

SCRATCH PAD MEMORY — An internal storage area reserved as an intermediate working area.

SCROLLING — See Horizontal Scrolling; Page Scrolling; Vertical Scrolling.

SDLC — Synchronous Data Link Control. An IBM communications line protocol. In contrast with BSC, another IBM communications protocols, SDLC is more efficient and provides for full duplex transmission.

SE — Systems Engineers. A vendor representative who provides engineering or programming support.

SEARCH CAPABILITY — The method employed by a word processor to locate an editing point. Unsophisticated systems usually search for document, page or paragraph number (reference code), or by line number. More sophisticated systems can also search by character string, having the ability to access the occurrences of some set number of sequential characters.

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Glossary

SECURITY — See System Security.

SELECT — See Automatic File Select.

SEQUENTIAL ACCESS — Data or storage such as magnetic tape which must be searched serially from the beginning to find any desired record.

SERIAL ACCESS — See Sequential Access.

SERIAL PRINTER — A computer or word processing output peripheral which prints out successive characters one at a time, either from left to right or bidirectionally for increased speed. Also refers to the interface used to connect the printer to the input device. The interface allows the printer to accept transmission of data which is sent serially, or one character at a time.

SERIAL STORAGE — A storage media organization in which data or text is serially recorded one character or text block after another. Text access points are retrieved by serially searching through the medium (usually a magnetic tape cassette or cartridge). Such storage is adequate for most word processing unless it is necessary to revise long documents or to move quickly from one access point to another. In such instances, random access storage media provides faster access.

SHARED-LOGIC WORD PROCESSING SYSTEM — A multi-terminal (operator console) system where each terminal shares the word processing power, storage and peripherals of a central computer. Included in this category are distributed logic systems which share peripherals and sometimes storage, but have most compute power (logic) distributed at the individual operator stations.

SHARED RESOURCE SYSTEM — See Shared System.

SHARED SYSTEM — A multi-terminal word processing system configuration whereby a number of intelligent, independent workstations share common peripheral devices such as printers, OCR readers, disk files, etc.

SIMULTANEOUS PRINTOUT — The ability of the system to print one document while simultaneously recording new text or revising previously recorded text. Some systems accept one page or one document at a time for simultaneous (also called background) printing; others queue the documents to be printed. If the system creates a print queue, printout may occur on a first-in, first-out basis, or the operator may be allowed to make priority assignments.

SKIP CAPABILITY — The ability of the system to skip over certain segments of text at operator command to edit a document on paper or on display while leaving it unchanged on the magnetic media. May also include the ability of the operator to record comments between special skip codes so that the comments will not be printed during

the final output, but are available for reference either on the display or on draft copies.

SLAVE — I/O or printer driven modules driven by a master unit. In some low-level word processing applications, it is common to have a master unit plus a number of slaves, automatically grinding out repetitive letters.

SNA — Systems Network Architecture. IBM's standardized relationship between its virtual telecommunication access method (VTAM) and the network control program.

SOFT HYPHEN — See Discretionary Hyphen.

SOFT SECTORED — A term used to describe a particular diskette format, and way of recording on the diskette. Soft sector disks are pre-formatted, having data fields that are changed and updated. The first track of a soft sector diskette identifies the disk, the next four tracks store basic format information such as the track and sector location of stored material. Since soft sector diskettes require a format, less storage capacity is available (250K bytes out of a possible 400K) for text storage than is available with hard sector diskettes.

SOFTWARE — A term coined to contrast computer programs with the "iron" or hardware of a computer system. Software is a stored set of instructions which govern the operation of a computer system and make the hardware run. Also used in word processing to mean all of the non-hardware parts of the system, including manuals, training, etc.

SOFTWARE-BASED — Refers to a word processor system design whereby word processing (or other) software is "loaded" or read into the system's random access memory via a form of media upon system start-up, as opposed to software that is resident in read only memory.

SOFTWARE HOUSE — A company which offers software programs and support service to users. This support can range from simply supplying manuals and other information to a complete counseling and computer part-time programming service.

SOFTWARE PROGRAMMABLE — A word processing system whose functions are defined by a program, generally supplied by the manufacturer, that may be redefined or updated by changing or replacing the program.

SOLID-STATE DEVICE — Any element that can control current without moving parts, heated filaments, or vacuum gaps.

SORT — See Automatic File Sort.

Glossary

STANDALONE WORD PROCESSING SYSTEM —

The classic, single-station word processor such as a mag keyboard or video display system which does not share the processing power of a central computer. (See Also Shared-Logic Word Processing Systems).

STATEMENT SIZE — The common sheet size for billing statements, which is 5½" x 8½".

STOP CODE — A reference code recorded on magnetic media which causes the system to stop during printout. Used to allow the operator to perform such manual procedures as changing fonts or paper on the printer.

STORAGE CAPACITY — Total amount of text stored per unit of media (card, cassette, diskette) which may be accessed by the system without changing media. A magnetic card system has about 5,000 to 10,000 characters "on-line." A magnetic tape cassette would hold up to 300,000 characters. Diskettes hold about 250,000 to 300,000 characters, but in many cases the word processor's operating system software is also stored on the diskette, so only 60 to 100 pages or so pages of storage are available. Disks can hold much larger quantities of data, frequently 2 to 50 million characters or more on each disk.

STORE-AND-FORWARD — The handing of messages or packets in a network by accepting the messages or packets completely into storage, then sending them forward to the next center.

STORED FORM RECALL/DISPLAY — The ability of a word processor to store a form (such as text, scale, lines or a combination of both) and display it upon demand. The operator can then combine the form with new keyboarded text, then printout the completed form, and/or store the form with text or the form and text separately.

STORED MULTIPLE FORMATS — The ability to store more than one format, and to access the desired format on operator command. Some systems have a formal routine for this operation. Other systems do not, but can allow the operator to store a format statement on a special segment(s) of media and access it at will.

STRIKE-ON — The process of setting type through direct impression via a device such as a composing typewriter. No photographic medium is involved; material is typed directly onto the paper that is used to prepare page layout.

SUB/SUPERScript PRINTOUT — The ability of the printer to print characters a fractional increment (sometimes adjustable) above and below the line for footnotes, formulas, etc.

SUPPLIER — See vendor.

SWITCH CODE — A reference code recorded on magnetic media which instructs the word processor to alternate between media stations allowing the combina-

tion of material from two sources, eg., a standard letter and a name and address list.

SWITCHED LINE — A telephone line that is connected to the switched telephone network.

SWITCHED NETWORK — A multipoint network with circuit switching capabilities. The telephone network is a switched network, as are Telex and TWX.

SWITCHING CENTER — A location where an incoming call/message is automatically or manually directed to one or more outgoing circuits.

SYNCHRONOUS — A mode of data transmission in which data is transmitted in blocks of characters. Sync characters are transmitted prior to actual data transmission to establish timing. Commonly used for batch transmission.

SYSTEM SECURITY — A number of systems provide a key lock, generally in place of the on/off switch, to prevent unauthorized access to the word processing system. A few of the more sophisticated systems require the keying of confidential password codes before the system itself, or specific documents, are available for access or revision.

TANK RECORDER — See Endless Loop Recorder.

TELECOMMUNICATIONS — The transmission/reception between terminals, or between terminals and computers, of digitized information over telephone lines.

TELECOMMUNICATION LINES — Telephone and other communication lines that are used to transmit messages from one location to another.

TELECONFERENCE — A meeting of geographically separated conferees connected simultaneously via a telecommunications system utilizing two-way voice and/or video message communication.

TELEPRINTER — Equipment used in a printing telegraph system. See also Teletypewriter.

TELEPROCESSING — The processing of data that is received from or sent to remote locations by way of telecommunication lines. Such systems are essential to hook up remote terminals or connect geographically separated computers. See also Telecommunications.

TELETYPE — Trademark of Teletype Corporation, usually referring to a series of different types of teleprinter equipment such as tape punches, reperforators, and page printers, utilized for communications systems.

TELETYPEWRITER — A generic term referring to the basic terminal equipment made by Teletype Corporation, and to teleprinter equipment. The teleprinter KSR (Keyboard Send-Receive Unit) receives the line signal and prints the same as an RO, but in addition, it has a

Glossary

keyboard that is used for manually sending line signals. It has no paper-tape capability but is very popular for conversational time-sharing and inquiry-response applications. The teletypewriter ASR (Automatic Send-Receive Unit) combines the other devices into one machine containing a keyboard, page printer, paper-tape transmitter and paper-tape punch. Paper tape can be prepared off-line, and this can take place while hard copy is being received from the line or while other paper tape is being transmitted.

TELEX — An automatic teleprinter exchange service available worldwide through various common carriers; in the United States, Western Union is the carrier.

TEMPORARY MARGINS — The ability to set a second, different margin for such purposes as an indented paragraph or quotations.

TERM DICTIONARY/GLOSSARY — The ability of the system to store technical vocabulary or frequently used phrases (such as the corporate address, signature blocks, etc.) and retrieve them via a significantly smaller number of alphanumeric keystrokes (usually two). This feature can greatly speed text entry for legal, medical, engineering and other applications with complex vocabulary or a large number of boilerplate phrases. On systems which do not have this feature but do have a global search and replace routine, it is possible to designate any word or phrase with an "impossible" combination (say "gx"), and then to replace the combination throughout the document before storage or printout.

TERMINAL — In general, a device equipped with a keyboard that is connected to a computer or word processor for the input of text/data.

TEXT EDITING — A general term that encompasses any re-arrangement or change performed upon textual material, such as adding, deleting, or reformatting.

TEXTVERARBEITUNG — The original term meaning "word processing" coined in Germany in 1965 by IBM.

THERMAL PRINTER — A non-impact printing technique which utilizes a special heat-sensitive paper. The paper passes over a matrix of dot heating elements. As data is fed to the printer, the dot elements relating to specific characters are heated, which changes the color of the paper at that point to reveal individual characters.

THIRD GENERATION TYPESETTER — An electronic typesetting device which uses a laser or CRT mechanism as the source of exposure for the photographic medium. Fonts are stored digitally, therefore these devices do not employ font masters and lens systems.

THIRD PARTY LEASE — A leasing arrangement in which an independent firm buys the equipment from the manufacturer and in turn leases it to the end user. The "middleman" firm is known as the third party.

THROUGHPUT — The total of useful information processed or communicated over a given period of time.

TIE LINE — A private-line communications channel provided by communications common carriers for linking two or more points together.

TIME-SHARED SERVICES — Commercially available access to a computer, on a time and storage charge basis, allowing the user to connect a communicating word processor or terminal to the time-shared service's system. Employed by infrequent users who have sophisticated needs as well as others who wish to access special data bases such as specifications libraries.

TIME SHARING — The sharing of the power (and cost) of a large computer facility among a number of users, each equipped with terminals.

TONER — In the electrostatic process, minute, dry particles of resin and carbon black that are used to create images. Toner is capable of accepting an electrical charge. It is carried to the photoconductor by a developer medium and transferred to the surface of a copy sheet by a series of successively greater electrical charges. See Electrostatic Process.

TRANSCRIPTIONIST — A person who types (transcribes) recorded dictation into document form.

TRANSMIT — To send data from one location and to receive it at another location.

TRUE LEASE — A type of Financial Lease under which ownership of the equipment remains with the lessor. To qualify as a true lease for tax purposes, the Internal Revenue Service Ruling 55-540 of 1955 states that: (1) title must remain with the lessor; (2) the rental payment must be competitive with industry rates, represent payment for use and have a rate that does not vary appreciably with or without purchase option; (3) the option to purchase price must not be less than the fair market price at the lease's expiration date; and (4) equity cannot be allowed on rental payments. For tax purposes, total monthly payments can be deducted.

TRUNK — A major link in a communication system, usually between two switching centers.

TURNAROUND TIME — The elapsed time between the submission of a word processing job to an operator and the return of the results.

TURNKEY SYSTEM — A complete system configuration of integrated electronic components, including a processor, I/O devices, software and programming which is delivered and is fully operational upon plugging in to a power source. The system is supplied from a single source; however, several vendor's products may comprise the total system with responsibility being divided among the vendors.

Glossary

TWX — Teletypewriter Exchange Service. A public teletypewriter exchange (switched) service in the United States and Canada formerly owned by AT&T but now belonging to Western Union. Both Baudot and ASCII-coded machines are used.

TYPAMATIC KEY — See Repeating Key.

UNATTENDED OPERATION — A mode of operation of a word processing system whereby because of the automatic features of the system certain functions, such as communications and printing, may be performed without an operator in attendance.

UNBUNDLED — The services, programs, training, etc. which are sold independently of the system hardware by the manufacturer. Thus, a manufacturer who does include all products and services in a single price is said to be "bundled."

UNDERLINE — See Automatic Input Underline.

UNDERScore DISPLAY — Underscored characters may be directly displayed, or may be indicated by display codes placed before and after material to be underscored on printout.

UPPER CASE — Capital or "large" size letters. Some draft or line printers print in Upper Case only rather than in Upper and Lower Case as with a typewriter.

USASCII — United States of America Standard Code for Information Exchange.

USASI — United States of America Standards Institute.

USER GROUP — Any organization made up of word processing users (as opposed to vendors) that gives the users an opportunity to share knowledge they have gained in using a particular system, to exchange programs they have developed, and to jointly influence vendor software, hardware, support, and policy.

VARIABLE TEXT — Text of a changing nature (keyboarded or prerecorded) which may be combined with recorded text such as selected paragraphs to form a complete document.

VDI — Video Display Terminal. A CRT or Gas Plasma tube display screen terminal or keyboard console that allows keyed or stored text to be viewed for manipulation or edit.

VENDOR — A company that supplies office equipment, software, or supplies.

VERTICAL SCROLLING — The ability to move vertically, a line at a time, up and down through a display page or more of text. Allows text which will not fit on a video display screen to be accessed for review or editing. Many systems have a display buffer (memory area) larger

than the display screen capacity (e.g., the screen might be 66 lines, while the display buffer holds and may vertically scroll through 99 lines).

VOICE-GRADE CHANNEL — Typically a telephone circuit normally used for speech communication, and accommodating frequencies from 300 to 3,000 Hz. Up to 10,000 Hz can be transmitted

VOLATILE — Refers to a type of memory which, if power has been disconnected, does not retain information.

VOR — Voice Operated Relay. A device that activates the recording mechanism of a dictation machine by a voice sound, and by which the absence of speech over the line will cause the unit to cease recording until speech resumes.

WATS — Wide Area Telephone Service. A service provided by telephone companies which permits a customer, by use of an access line, to make calls to telephones in a specific zone on a dial basis for a flat monthly charge. Monthly charges are based on the size of the area in which the calls are placed, not on the number or length of calls. Under the WATS arrangement, the U.S. is divided in six zones to be called on a full-time or measured-time basis.

WEIGHTED AVERAGE — An averaging technique where the data to be averaged is multiplied by different factors. For example, a regular average is equivalent to a 50-50 weighted average. An average could be made up by taking 90% of one figure and 10% of another figure. This would then be a weighted average. Note that the weights must always be equal to 100%.

WIDEBAND — A communications channel having a bandwidth characterized by data transmission speeds of 10,000 to over 1 million bits per second.

WIDOW/ORPHAN — See Automatic Widow Adjust.

WINCHESTER DISK — See Magnetic Media.

WORD PROCESSING — The transformation of ideas and information into a readable form through the management of personnel, procedures, and equipment to provide faster and more efficient business operations.

WORD PROCESSING SYSTEM — Refers to the specific hardware, software and peripheral devices employed to perform word processing tasks.

WORKSTATION — A basic physical unit of a word processing system which may be comprised of such hardware features as a display, keyboard, and media drive(s), that allows the operator to perform word processing (and perhaps other) tasks.

WP — See Word Processing.

Glossary

WPM — Words Per Minute. A measure of print or transmission speed usually computed on the basis of six characters (five plus a space) per word.

WPS — Word Processing Society. A large independent word processing association (not affiliated with IWP) headquartered in Milwaukee.

WP TYPEWRITER — See Magnetic Keyboard.

▲ **X.25** — The protocol recommended by the CCITT as the standard for international transmission of data over telecommunications lines.

XEROGRAPHIC PRINTER — See Electrostatic Printer, Electrostatic Process.

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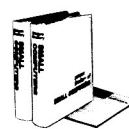
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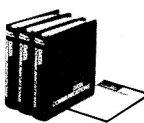
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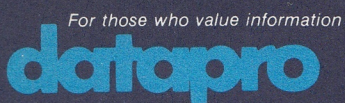
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